

Book Reviews

THE PICTORIAL GUIDE TO THE PRIMATES. By Noel Rowe. East Hampton, NY: Pogonias Press. 1996. 274 pp. ISBN 0-9648825-1-5 \$59.95 (paper).

Shown a copy of *The Pictorial Guide to the Primates*, Washoe, the first chimpanzee to be taught sign language, replied "Gimme!" The talk around town is that this book evokes a similar response within the human primate community. Noel Rowe has traveled the world photographing prosimians, monkeys, and apes in both natural and zoo habitats and has compiled his exquisite pictures (along with those of other professionals) into the most comprehensive illustrated guide yet published to the primate order. More than 10 years of effort, combined with changes in world politics, have made it possible to obtain never-before-seen photos of many species from previously restricted areas such as China, Cambodia, Burma, Laos, and Vietnam (Rowe's special regional interests). In addition, photos of newly discovered or rediscovered primates from Brazil and Madagascar are featured.

Although *The Pictorial Guide* is handsome enough for any coffee table, it is more than simply a pretty picture book. Rowe provides information on taxonomy, geographic distribution, biology, ecology, behavior, and conservation status for each species. In the classroom or field, students and researchers can access over 1,000 literature citations. For aspiring primate photographers, photos are still missing from 11 species: two species of sportive lemur, the pygmy tarsier, five species of titi monkey, the Coiba Island howler, the drygas guenon, and the white-fronted leaf monkey. In addition, there are still a number of species for which basic information on biology, ecology and behavior is unknown. The author expresses hope that this lack of information will spur both novice and veteran researchers to action.

Rowe's taxonomy follows Groves (1993), although he offers references when there are differences of opinion and notes whether there is controversy surrounding their systematic status by using the term 'disputed.' The geographic distribution of each species is listed and presented graphically on continental maps. Biological information includes both distinguishing and general physical features and life history notes. Ecological and behavioral information includes notes on habitat, diet, locomotion, activity patterns, social behavior and social structure. The conservation status of each species, based on the World Conservation Union (IUCN), is also presented.

Rowe's commitment to primate conservation is evident in his choice of contributors to the book's prefaces. Jane Goodall points out in the Foreword that, despite our discovery or reclassification of more than 50 additional species during the past 35 years, and the hundreds of long- and short-term primate field studies carried out in this period, many questions still remain. Goodall summarizes two essential features of *The Pictorial Guide*: it shows us how beautiful and diverse the primate order is and it reminds us that without our help they will vanish. In the Introduction, Russell Mittermeier continues in this vein, stressing that the future of many primate species is bleak: more than half are considered to be of conservation concern by IUCN. He emphasizes the importance of better protection and continued research to prevent their extinction.

The only comparable work to this volume is John and Prue Napier's *The Natural History of the Primates*, at the time of its publication in 1985 the most comprehensive survey of the primate order. Perhaps the most important distinction between this predecessor work and *The Pictorial Guide* is that Rowe includes the latest systematics information. Much of the taxonomy Napier and Napier presented in their profiles of 57 genera (including 36 species of prosimians and 137 species of anthropoids) is now out-

dated. There are 234 species covered in *The Pictorial Guide*, including 10 new species which have been described in the last 15 years. The larger number of species is due not only to newly discovered species but to changes in thinking by systematists and to recent DNA work on complicated species groups, all of which Rowe does a nice job of sorting out. In the past we have seen subspecies given new species status, such as the species distinction between *Pan troglodytes* and *P. paniscus*. In *The Pictorial Guide* we see a split within the genus *Pongo* between Bornean and Sumatran species. Perhaps in the next edition we will see the three subspecies of *Gorilla* raised to two or three different species. It is encouraging to see the use of the monophyletic grouping of pongidae (orangutans) and hominidae (chimpanzees, gorillas, and humans) in a popular book, in contrast to the persistent paraphyletic grouping of all great apes with the exclusion of humans.

The second difference is the lack of background information provided in *The Pictorial Guide*. The Napier and Napier book was intended primarily as an introductory text and reference work, and included chapters on primate characteristics, origins, biology, behavior, and human evolution along with its species profiles. Although the primate profiles are more extensive and complete in Rowe's book, *The Pictorial Guide* foregoes these aforementioned chapters and instead opts for a short nine page overview, primarily showing the reader how to use the book, defining terms, explaining concepts, and reviewing conservation issues and organizations. The resulting limitation is that *The Pictorial Guide* cannot stand alone as an

introductory text on the primates and instead must be used as a supplement.

There are two other considerations in the use of the book. First is its high cost, which given the number of illustrations is not surprising. Used as a textbook supplement in an introductory course, the total book cost could be over \$100. It is important to keep in mind, however, that half the profits from the sale of this book will be donated to organizations working for the conservation of primates. Second, there are critical references missing for some species. Rowe admits his difficulty in researching the entire primate order, leading to omission of some important references. For example, more than 10 references on western lowland gorilla ecology and behavior by Caroline Tutin and her colleagues are completely absent from the gorilla section. However, other references can often be found secondarily through the provided citations when a thorough bibliographic search is needed.

In summary, in *The Pictorial Guide to the Primates* Noel Rowe has created a major compendium on the world's living primates that will serve as a valuable reference for a scientifically literate but general audience for years to come.

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IN REMEMBRANCE: ARCHAEOLOGY AND DEATH.
Edited by David A. Poirier and Nicholas F. Bellantoni. Westport, CT: Bergin and Garvey. 1997. 264 pp. ISBN 0-89789-419-7. \$59.95 (cloth).

During the last decade or so, bioarchaeologists working in North America have shown increased interest in the study of non-native

human remains, for a variety of reasons. For some, this development has grown out of either a real or perceived decrease in access to native remains housed in various repositories in the U.S. and Canada. Legislation enacted mandating archaeological mitigation of cemeteries threatened by construction and other circumstances has also resulted in the study of a range of skeletal

samples by physical anthropologists. Owing to this latter development, many of us have been approached to provide expertise on the excavation of historic-era cemeteries and the analysis of human remains contained within them. This volume is emblematic of at least one positive outcome of this development: study of these skeletons is informing our understanding of the biohistory of African-Americans and Euroamericans especially, in regard to issues of health, disease, demography, activity, social behavior and inequality, resource access, and quality of life generally. This burgeoning "osteomuseum" is literally putting faces to individuals who are either unknown or poorly known from historical or archaeological scholarship.

Following the brief introductory essay on historical bioarchaeology by Owsley, *In Remembrance* presents 14 chapters, grouped into three parts. Part I highlights research on diverse collections of remains ranging from infants recovered from late 18th-century privies in Philadelphia (Burnston), to mentally-impaired from a 19th-century almshouse in New York State (Phillips), and African-Americans from a wide variety of settings, including urban workers from Philadelphia (Crist, Roberts, and Pitts et al.), soldiers who served on Folly Island, South Carolina (Rathbun and Smith), iron workers from Maryland (Burnston), and post-Reconstruction era farmers from Arkansas (Maish, Rose, and Marks). I am impressed with the depth and breadth of the historical information that archaeologists and bioarchaeologists have garnered to set the important context for understanding some of the findings derived from analysis of skeletons. Crist and coworkers, for example, have combed the archives representing 19th-century Philadelphia. Consistent with the historical information, these "[p]eripheralized but never insignificant" individuals from two church cemeteries have traumatic injuries that occurred from both accidental and violent means. Evidence is presented to indicate that individuals from the earlier of the two cemeteries had a higher prevalence of violence-related trauma (e.g., gunshot wounds), perhaps reflecting the greater rep-

resentation of once-enslaved individuals than present in the later cemetery.

Rathbun and Smith's study of skeletons of African-American Union troops from South Carolina gives new meaning to the expression "war is hell." As with the general picture of mortality in the military on both sides, most deaths were due to disease, not battlefield injuries. These soldiers also show degenerative articular pathology due to heavy physical labor and activity, especially in the upper body (e.g., vertebrae). The study of late 19th to early 20th-century African-Americans from rural Arkansas makes clear that living conditions for this formerly enslaved population did not improve following the Civil War. The bone infection rate is extraordinary; with one exception, every neonate has some type of profound infectious lesion, and based on the high prevalence of porotic hyperostosis, more than half suffered from anemia.

Phillips presents an historically informed discussion of hyperostosis frontalis interna, a thickening of the frontal bone often accompanied by endocranial sclerotic nodules and plaque, in individuals living in an almshouse in Rome, New York. His analysis suggests that the lesions are associated with the permanent inhabitants of the almshouse—the mentally impaired—versus the more transitory individuals whose suffering was primarily limited to poor economic circumstances.

Part II presents five case studies of trauma and desecration of Euroamerican cemeteries. One of the most interesting is the study of skeletons representing captives imprisoned by the French at Quebec City in the mid-18th century (Piédalue and Cybulski). These individuals express skeletal pathology reflecting difficult circumstances, including anemia, infection, and for the men specifically, vertebral degenerative joint disease. In another conflict setting, Scott and Willey review their study of soldiers' remains recovered from the site of the Battle of the Little Bighorn (South Dakota). Despite their young age, there is a considerable amount of degenerative pathology in the lower backs of most of the soldiers, which must have been caused by the countless hours spent riding horseback. Although dental health was relatively

poor by modern standards, Scott and Willey found little evidence of infectious diseases common in the 19th century (e.g., tuberculosis, syphilis). Injuries sustained by the victims reveal the nature of the last moments of their lives and shortly after. Although gunshot trauma is well documented, cuts are the most frequent perimortem modifications; one battle victim had no fewer than 98 cuts.

Study of remains from a small cemetery in Connecticut provides potential perspective on lifeways of farmers during the 18th and 19th centuries (Bellantoni, Sledzik, and Poirer). The age-at-death profile is unusual in that half of the individuals are pre-teenagers, and nearly a quarter of the remainder are older than 50 years of age. Bellantoni and coworkers indicate that this is the expected demographic pattern in an historic-era cemetery population, and that the relatively low number of young and middle-aged adults "is probably a result of developed immunities and stronger resistance to disease" (p. 140). In the study of remains recovered from a rural family cemetery from central Illinois, we documented a very similar age composition (Larsen et al., 1995). Examination of historical records and pioneer biographies revealed that most individuals born on the Illinois family farm left soon after reaching adulthood, resulting in burial elsewhere. Only individuals who died on the farm either during childhood or in older adulthood were interred in the family cemetery. Alternatively, then, the dearth of young adults in the Connecticut cemetery may be simply due to exclusion of these individuals owing to their migration from the natal setting.

Bioarchaeology and forensic anthropology are playing an increasing role in documenting criminal desecrations of cemeteries (Bellantoni and Cooke). Large-scale disturbances of cemeteries following natural disasters have recently come into the public eye. Following the flooding of the Mississippi River in 1993, hundreds of graves eroded from the Hardin (Missouri) town

cemetery. Sledzik and Hunt recount their efforts to locate and identify human remains spread over some 26 square miles of farmland. This undertaking is testimony to the important contributions that forensic anthropologists have made to this and other post-disaster settings.

Part III presents a resource guide to cemetery location and excavation (Owsley, Ellwood, and Richardson) and archival documentary research (Bell). Lastly, in their concluding chapter, Poirier and Bellantoni discuss the important accommodations that the archaeological community is making to the other publics who are linked in some manner with the cemeteries being excavated, especially the descendants of the deceased.

In Remembrance is the third edited volume to appear in as many years with a focus on non-native biohistory, the first two being Grauer's *Bodies of Evidence* and Saunders and Herring's *Grave Reflections*. Like the other volumes, this work demonstrates the importance of human remains in understanding the full picture of the history of the human condition. Physical anthropologists reading *In Remembrance* may be disappointed by the generally more superficial discussion of biological research on human remains than presented in the other volumes. Few of the chapters provide substantive applications of or innovations in bioarchaeological method or theory. Nevertheless, this collection of essays is a positive contribution to the growing discussion in anthropology of biohistory of recent humans.

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ACHE LIFE HISTORY: THE ECOLOGY AND DEMOGRAPHY OF A FORAGING PEOPLE. By Kim Hill and A. Magdalena Hurtado. Hawthorne, NY: Aldine de Gruyter. 1996. 561 pp. ISBN 0-202-02037-1. \$32.95 (paper).

Life history theory is a branch of evolutionary theory that studies the timing of development, reproductive events, and mortality. Life history theory assumes natural selection will produce organisms that allocate effort through their life's course in optimal ways. As such, it provides a foundation on which to predict and explain human variability in reproductive outcomes. Kim Hill and A. Magdalena Hurtado have dedicated the last 20 years to the study of the life history characteristics of the Ache who, until recently, lived as full-time foragers in the rain forests of Paraguay. Results of this experience are presented in this book.

The book is divided into 14 chapters. The first provides theoretical justification for this study, the second gives an overview of the environment and general ecological characteristics of the Ache, while the third offers a detailed discussion of the methodology and techniques of data collection used. Chapters 4 through 9 provide detailed demographic profiles of the population. These chapters provide baseline information on the characteristics of full-time foragers before and after contact with Europeans. In their interesting examination of demographic changes occurring after contact, the authors give new information on the role of homicide to the high death rates during and after initial contact. Although it has always been assumed that disease was one of the most important causes of death following contact with Western populations, the research on the Ache indicates that homicide and accidents were as important in changing the profile of these populations. This suggests that homicide, accidents, and conspecific violence have also been major selective forces in human evolution.

Chapters 10 through 13 evaluate the relationship between demographic characteris-

tics, body size, maturity, and ecological traits. In Chapter 10 the authors show that among the Ache there is a direct relationship between resource availability, fertility, and mortality. Specifically, the authors demonstrate that the greater the resources, the greater the fertility, and the lower the mortality. Furthermore, they find that the effects of resource availability are greater on fertility than mortality, and are greater on males than females. The interaction between resource availability and fertility are further explored in Chapter 11 with reference to variability in body size and age at first reproduction. Interestingly, the authors find that higher fertility is associated with larger body size, although the increased body size has its trade-off in its association with a decrease in total lifetime fertility.

One important application of life history theory is in the study of human variability and the cessation of reproductive capacity. Humans, apart from one species of toothed whales, are the only species experiencing non-facultative and total cessation of reproductive capacity well before the end of their maximum potential or average lifespan. Studies of life history are helping to elucidate why these differences occur, a topic addressed in Chapter 12. An interesting finding is that, contrary to life history theory, the Ache do not seem to maximize their reproductive success. Also, for the Ache there is no relationship between present fertility and offspring survival rates. In Chapters 13 and 14 the authors examine kin effects on mortality and fertility. Surprisingly, only Ache parents have a strong influence on child mortality. Fertility, on the other hand, was affected by kin relationships.

This is an interesting monograph. The authors have developed a vast amount of information bearing on many biological problems. They have made remarkable use of small samples, and their findings have implications for the application of life history theory to understanding variability in human reproductive traits. This book will be

very useful for upper-level undergraduate and graduate level courses, and I highly recommend it to researchers concerned with demographic features of foragers, past and present.

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